

**Amendments to the Claims**

The following listing of claims replaces prior versions and listings of claims in the application.

**Listing of Claims:**

1. (Cancelled)
2. (Cancelled)
3. (Cancelled)
4. (Cancelled)
5. (Cancelled)
6. (Cancelled)
7. (Cancelled)
8. (Cancelled)
9. (Cancelled)
10. (Cancelled)
11. (Cancelled)
12. (Withdrawn) The method of claim 1, further comprising:

- (c) transplanting the selected cells into a host.
13. (Currently Amended) A method for enriching a population of human cells for the neural stem cell fraction, comprising:
- (a) contacting a population of cells containing a fraction of neural stem cells with a ~~reagent that specifically binds to~~ an anti-p75 (low-affinity neurotrophin receptor) antibody; and
  - (b) selecting  $p75^+$  cells, wherein the selecting is by flow cytometry and wherein the selected  $p75^+$  cells are enriched in the fraction of neural stem cells as compared with the unselected population of cells.
14. (Currently Amended) The method of claim 13, further comprising:
- (c) contacting the selected  $p75^+$  cells with ~~a reagent that specifically binds to the an~~ anti- $P_0$  antigen antibody; and
  - (d) selecting  $P_0^-$  cells, wherein the selecting is by flow cytometry and wherein the selected  $p75^+ P_0^-$  cells are enriched in the fraction of neural stem cells as compared with the population of neural cells.
15. (Currently Amended) A method for isolating a neural stem cell, comprising:
- ~~(a) contacting a population of uncultured cells containing a neural stem cell with a combination of reagents, wherein each reagent in the combination either selectively binds to either a neural stem cell positive marker or a neural stem cell negative marker;~~
  - ~~(b) selecting cells which bind to reagents that selectively bind to a positive marker or which do not bind to reagents that selectively bind to a negative marker or a combination thereof;~~
  - ~~(c)~~ (a) introducing at least one selected cell enriched according to the method of claim 13 or claim 14 to a culture medium capable of supporting the growth of neural stem cells; and

- (d)(b) proliferating the selected cell in the culture medium, wherein the proliferated progeny cells are derived from an isolated neural stem cell.
16. (Original) The method of claim 15, wherein the culture medium capable of supporting the growth of neural stem cell comprises a serum free-medium containing chick embryo extract.
17. (Withdrawn) The method of claim 15, further comprising:
- (e) differentiating the proliferated progeny cells to produce a cell culture comprising differentiated cells selected from the group consisting of neurons, glia, myofibroblasts, and combinations thereof.
18. (Withdrawn) The method of claim 15, further comprising:
- (e) transplanting the proliferated progeny cells into a host.
19. (Withdrawn) The method of claim 15, further comprising:
- (e) contacting the proliferated progeny cells with a biological agent; and
  - (f) determining the effects of the biological agent on the proliferated progeny cells.
20. (Withdrawn) The method of claim 15, further comprising:
- (e) inducing the proliferated progeny cells to differentiate in a second culture medium containing a biological agent; and
  - (f) determining the effects of the biological agent on the differentiated cells.
21. (Withdrawn) The method of claim 15, further comprising:
- (e) inducing the proliferated progeny cells to differentiate in a second culture containing a biological agent;
  - (f) contacting the differentiated cells with the biological agent; and
  - (g) determining the effects of the biological agent on the differentiated neural cells.

22. (Withdrawn) An *in vitro* cell culture composition, comprising:
  - (a) a population comprising at least 50% self-renewing multipotent neural stem cells, wherein the neural stem cells have been derived from uncultured tissue; and
  - (b) a culture medium that supports the growth of neural stem cells.
23. (Withdrawn) The composition of claim 22, wherein the population of cells are derived from dissociated nerves.
24. (Withdrawn) The composition of claim 22, wherein the population of cells are derived from primary peripheral nervous system (PNS) tissue.
25. (Withdrawn) The composition of claim 22, wherein the population of cells are derived from primary central nervous system (CNS) tissue.
26. (Withdrawn) The composition of claim 22, wherein the population of cells are derived by immunoselection using an anti-p75 antibody.
27. (Withdrawn) The composition of claim 22, wherein the population of cells are derived by immunoselection using an anti-P<sub>0</sub> antibody.
28. (Withdrawn) The composition of claim 22, wherein the population of cells has at least 80% p75<sup>+</sup> cells.
29. (Withdrawn) The composition of claim 22, wherein the neural stem cells are rat.
30. (Withdrawn) The composition of claim 22, wherein the neural stem cells are chick.
31. (Withdrawn) The composition of claim 22, wherein the neural stem cells are human.

32. (Withdrawn) The composition of claim 22, wherein the culture medium comprises a serum free-medium containing chick embryo extract.
33. (Withdrawn) The composition of claim 22, wherein the culture medium comprises an instructive factor.
34. (Withdrawn) The composition of claim 33, wherein the instructive factor is a growth factor of the TGF- $\beta$  superfamily.
35. (Withdrawn) The composition of claim 33, wherein the instructive factor is a neuregulin (NRG-1).